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WE invite correspondence and special articles upon subjects of interest to all engaged in the manufacture and sale of Perfumes, Soaps, Toilet Articles, Flavoring Extracts, etc. THE AMERICAN PERFUMER and ESSENTIAL OIL REVIEW is the OPEN FORUM for each and all in the Trade.

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THE ITALIAN CATASTROPHE.

The awful calamity that befell Messina and surrounding cities in Sicily and Reggio and nearby towns in Calabria, is probably the worst in the history of mankind. The earthquake and tidal wave that devastated Lisbon in 1755 was almost unimportant by comparison and a similar occurrence in Yeddo, Japan, some two centuries ago did not bring such terrible consequences in its train.

Our readers have been made familiar with the facts through the daily press, and it remains in our province then to report how the essential oil industry and its co-ordinate branches have been affected. In our November issue we published the Lemon Industry of Sicily, by the late Arthur S. Cheney, U. S. Consul at Messina, and pursuant to the instructions of the Department of State Consul Cheney was further investigating the subject when his end came.

In this issue we publish his report of December 7, but it should be borne in mind that the conditions as of that date no longer exist, though to what degree the earthquake has depleted the stock of oils no one can yet say. Already the Lemon Oil market is showing signs of easing and it may be that within two or three months all the oil that is needed may be available. But at what price?

Many of the Messina shippers are among those who perished, and in fact most of the local importers have been unable to learn anything about their principals. Dr. G. Bosurge, a member of the firm of Sanderson & Co., is safe at Catania, but Mr. Oates, his partner, is dead.

W. J. Bush & Co., Inc., New York, report that their principal, Mr. Luigi Sofio, of John Sofio & Co., is safe with his family.

Fratelli de Pasquale have not responded to cablegrams from their American agents, The National Aniline & Chemical Co. This house was agent for the London & Southwestern Bank, Ltd.; The London & Midland Bank, Ltd., of London; and the First National Bank of Chicago. Mr. A. G. Cailler, American agent for Cailler & Co., was on the continent at the time of the disaster, having left

Messina on December 26. He lost his mother and two brothers. We are told that he has sailed for New York on S.S. *Lucania* and will therefore arrive shortly, and enable us to report the post-earthquake situation from an expert's point of view.

We hope soon to receive a special report outlining present conditions in Sicily and Calabria, and we will be glad to lay it before our readers in an early issue.

A TRIBUTE TO THE MEMORY OF MR. MARCHI.

It has given us satisfaction to respond to the following appeal, and we lay this communication before our readers in the hope that those who knew Mr. Marchi may, if so disposed, show their appreciation of his kindly ways by contributing to the alleviation of his widow's wants.

THE MANUFACTURING PERFUMER'S ASSOCIATION OF THE UNITED STATES.

Office of the President, No. 74 Reade Street.

New York, December 26, 1908.

PERFUMER PUB. Co., 100 William St., City.

Gentlemen:—Mr. Emilio Marchi, a former associate member of this association, died in September after long illness and two operations. His widow reported she was left penniless.

Upon investigation and request that I take up the matter, I did so, giving the opportunity to our membership to subscribe to a fund for her benefit.

The subscriptions to this date amount to $415. The kind assistance of Messrs. Killeen and Spiehler is appreciated. She is very grateful.

If any of your readers who have not been reached wish to help, kindly make check to my order and send to,

Yours very truly,

THEO. RICKSECKER, Pres.

TRADE MARK PROTECTION.

During the past two years we have served our subscribers who wished to protect their trade marks by conducting for them proceedings according to United States statutes, before the Commissioner of Patents. Such registrations give adequate protection; but in view of the fact that equal protection may be received by other means that are more expeditious and cheaper, the Commissioner of Patents reports that registrations are falling off at the rate of about 10% a year.

Does that mean that fewer new trade marks are being introduced into interstate commerce? Not at all. Manufacturers have learned that the common law will afford the needed protection, as all that is necessary is to establish priority, and that can be done by the plan we are now following.

In this issue we publish two new trade marks of perfumers, toilet preparations and soap, and the illustrations show the kind of type used in printing the trade mark, in addition to disclosing the text of the trade mark itself. All those who may have any good reason to offer by way of protest to the registration of these trade marks should communicate with us promptly.

We invite special attention to our announcement on page XVII.

A "PURE MERCHANDISE" BILL.

On Dec. 7th Representative Hill, of Iowa, introduced in the House of Representatives at Washington a bill making it a misdemeanor to manufacture for sale or transportation imitated articles of commerce, unless such articles are branded so as to show their exact ingredients. The measure is broad in its scope and would apply to any article of commerce recognized as a subject of transportation and sale by the rules of the Inter-State Commerce Act. Practically all articles in domestic use would be affected, including clothing, furniture or any article sold under a name now recognized as designating any mineral, metallic, animal or vegetable substance which occurs in a state of nature.

Conviction of a first violation of this act is made punishable by a fine not to exceed $500 or one year's imprisonment, or both, while each subsequent offense may be punished by a fine of not less than $1,000 or one year's imprisonment, or both.

It is provided that no retail dealer shall be prosecuted under the act if he can establish a guaranty signed by the wholesaler, jobber, manufacturer or other person from whom he purchased such articles, to the effect that the article is not an imitation or misbranded within the meaning of the act. The enforcement of the law is charged to the Department of Agriculture, the examination of specimens of articles of commerce to be made by the Bureau of Chemistry.

"IONONE" DECISION APPEALED.

We are advised by George H. Bruce, Esq., attorney for Van Dyk & Co., that on January 12, 1909, he made a motion before Judge Ray, of the United States Circuit Court, Southern District of New York, for a suspension of the injunction, recently decreed by Judge Ray, on the appeal to the higher court. This motion was granted on filing an approved bond of $3,000.

It is expected that the appeal will be heard during the month of February.

Just as we go to press we learn that John H. Woodbury committed suicide. A notice of the incorporation of his business appears on page 211 of this issue.

CARL BUEDINGEN.

Carl Buedingen, formerly of the Buedingen Box and Label Co., Rochester, N. Y., died in that city on November 24, 1908, in his 44th year.

He had been a manufacturer of boxes and labels to the perfumery and soap trade since 1886, and was well and favorably known to the trade throughout the United States.

Mr. Buedingen was born in Germany in the year 1865, and at the age of 16 he came to this country. In 1886 with his father and brothers he formed the Buedingen Mfg. Co., of which he was manager until poor health caused his temporary retirement. This concern was succeeded by the Buedingen Box and Lithograph Co., which was reorganized in 1907 as the Buedingen Box and Label Co., under which style it now prospers. Last year Mr. Buedingen's continued poor health caused his definite retirement from active business, and his interests were assumed by his brother, Mr. Ferdinand B. Buedingen.

CORRESPONDENCE.

To the Editor of PERFUMER:

Sir—We have noticed in your November issue a letter on the subject of German camomile oil.

As you probably know, we are one of the two or three manufacturers in Eugland, who actually grow camomiles on their own land, and distil them in their own stills. Therefore we can speak with some authority on the subject.

The English oil is distilled from Anthemidis Nobilis. It is blue when freshly distilled, but changes with age to greenish brown and brown. The specific gravity is from .905 to .915. It is soluble in 70% alcohol 1 in 6, and the optical rotation is, as a rule, from 1° to 3°. It is almost impossible to make this observation with the blue oils when using the Na flame. Its saponification number is from 250 to 300.

We believe the oil of German camomile comes from Matricaria Chamomilla. It is quite different from the English oil of camomile, solidifying into a solid mass at 0° C and even higher. The specific gravity is .930 to .940. It does not yield a clear solution with even 90% alcohol. The saponification number is about 45.

The oil is said to be adulterated freely, and if your correspondent finds out upon analysis that his sample furnishes divergent figures from those given, he will have good reason to think "it is compounded."

We have very little doubt that there are some honest, straightforward manufacturers in Germany, who make a genuine German Chamomile Oil, but there are also other sorts of manufacturers.

Probably a note from Gildermeister & Hoffman's "Volatile Oils" will be of interest to your correspondent, if he has not already seen it.

We are, yours faithfully,

STAFFORD ALLEN & SONS. LTD.
K. C. ALLEN, Director.

London, Dec. 12, 1908.

NOTE FROM GILDERMEISTER & HOFFMAN'S "VOLATILE OILS."

Up to quite recent times Roman Chamomile was cultivated to a considerable extent in the neighborhood of Leipzig, but has been dropped for several years because no longer profitable. At the present time, the oil is distilled principally in Mitcham, near London, where the plant is cultivated, and where it also grows wild.

To the Editor of THE AMERICAN PERFUMER:

Dear Sir—We have been interested in reading "Lavender, Its History and Production," which appears in your December issue.

We notice the writer says that Lavender is raised in the counties of Surrey, Kent, Hertfordshire, and Lincolnshire. We should just like to mention that Suffolk also is now a most important county for its cultivation. At the present time, we are probably one of the largest growers of English Lavender, and our farms in Suffolk cover a very considerable area, the soil there being similar to that at our Ampthill farms in Bedfordshire, where in olden times we grew large quantities of it. There is no question that the best Lavender Water cannot be obtained unless it is made from the finest English Oil.

We are in receipt of yours of December 21, which matter shall have our consideration.

We are, yours faithfully,

STAFFORD ALLEN & SONS, LTD.
K. C. ALLEN, Director.

London, Jan. 9, 1909.

ESSENTIAL OILS IN SICILY.

REPORT FROM CONSUL ARTHUR S. CHENEY.

PRODUCTION AND PRICES OF OILS—CONDITIONS OF THE TRADE BEFORE THE EARTHQUAKE.

Consul Arthur S. Cheney, who lost his life in the destruction of Messina, following the earthquake that wrought so much destruction to life and property in Italy, had forwarded previous to the disaster a report on the production for the present season of essential oils of bergamot, orange, and lemon. This report was prepared upon request of the Department of Commerce and Labor and in pursuance with a general instruction issued by the Department of State to American consular officers in southern Italy. In considering the deductions of the consul on then existing conditions, the fact that great changes have occurred should be kept in mind. The report, which is dated Messina, December 7, follows:

The manufacture of the essential oils of orange, lemon, and bergamot usually begins in this consular district about October 15, the first pressings of oil being made at Syracuse about the above date. Generally the season commences in the provinces of Catania, Messina, and Calabria some ten days to two weeks later, respectively. Annual statistics are reckoned from November 1 to October 31.

It is impossible to give the exact production of the essential oils for several reasons. The oils are expressed in many small establishments, the owners of which either keep no records of their production or are very loath to give them out. Although nearly all the production is shipped out of the country, it is useless to base estimates solely on the export statistics, since no reliable figures of the amount of pure oil could be deduced. Finally, the oil obtained from a given amount of fruit varies from year to year, not only in quality but also in quantity, so that calculations could not be made from the estimated fruit production.

The amount of fruit grown is never actually measured and can only be roughly calculated by some roundabout method. Thus, to calculate the number of lemons grown the production of citrate of lime, which is fairly accurately known, is taken as a basis. Since it requires 100,000 lemons to make one pipe (of 305 kilos, or 671 pounds) of citrate of lime, and it has been shown that just about one-third of the total crop of lemons is used to manufacture by-products, the number of pipes of citrate of lime multiplied by 100,000 and the product by 3 will give roughly the total number of lemons. In this way the production was calculated for 1907 at 6,900,000,000 lemons in Sicily and Calabria, since there were manufactured 23,000 pipes of citrate of lime. The production for the present season will probably exceed these figures by 20 per cent.

For estimating the number of oranges and bergamots there is no such ready means of calculation, and the production is unknown.

AMOUNTS EXPORTED.

Export statistics for the essential oils separately are not available, but the following statement shows the combined amounts exported from Messina: From November 1, 1906, to October 31, 1907, 957,095 kilos (2,105,609 pounds) gross, or about 574,257 kilos (1,263,365 pounds) net; from November 1, 1907, to October 31, 1908, 899,686 kilos (1,979,304 pounds) gross, or about 539,811 kilos (1,187,584 pounds) net. The decrease in 1907-8 amounted to 57,409 kilos (126,300 pounds) gross, or about 34,446 kilos (75,781 pounds) net.

The shipments to the United States from November 1, 1906, to October 31, 1907, were 510,719 kilos (1,123,582 pounds) gross, or about 306,431 kilos (674,148 pounds) net; from November 1, 1907, to October 31, 1908, 391,640 kilos (861,608 pounds) gross, or about 234,984 kilos (516,965 kilos (261,974 pounds) gross, or about 71,477 kilos (157,183 pounds) net. The decrease for 1907-8 amounted to 119,079 pounds) net.

The declared exports of essential oils to the United States from Messina amounted in value to $505,121 in 1906 and to $1,036,323 in 1907.

During the calendar year 1907 essential oils were exported through Messina to the following countries, given in the order of the value of the exports:

United States	Spain	Turkey
Great Britain	Sweden	Japan
Austria	Norway	Malta
Australia	Argentina	India
France	Denmark	Greece
Germany	Egypt	Canada
Holland	China	Roumania
Russia	Belgium	

About 75 per cent. of the total exports of essential oils from the Kingdom being shipped through Messina, the foregoing statistics will serve to illustrate the conditions for the entire country.

OIL OF BERGAMOT.

The world's supply of oil of bergamot comes from a comparatively small part of Calabria, in the extreme south of Italy, fronting on the Straits of Messina. This region extends from a little north of Villa San Giovanni

to Brancaleone. No bergamots are grown in Sicily, even directly opposite and only six miles distant. The season for expressing this valuable oil has only just commenced, some work being already done at Melito and Porto Salvo.

Along the "Fronte Calabria," from Villa Giovanni to Reggio, some oil of an inferior quality is now being obtained from windfalls. The fruit is still green and small, owing to the protracted drought of the past summer. Good oil of standard quality (containing 36 to 40 per cent. of linalyl acetate) is not yet to be had. With the advancing season, however, there is no reason to suppose that the quality will be inferior to that of past years.

For reasons already stated, the probable amount of bergamot oil to be produced this season cannnot be accurately estimated, but the most experienced and careful observers agree that the quantity will not be less than last year, and some even place their estimate at 8 to 10 per cent. in excess.

The price quoted to-day (December 7) for the standard grade bergamot oil, for export to the United States, is $2.62 per pound c. i. f. New York. This price is somewhat lower than at the same time in 1907, but then prices were falling from a much higher level. The demand is not very brisk just now and prices may even recede 5 to 10 per cent in the near future, but will probably then recover, as is usual, later in the season. Another factor which will prevent a much greater fall in the market and will assist in causing an early upward tendency is that stocks of oil from last season are very restricted. Bergamot oil is always subject to more or less speculation among the Calabrese, and this makes the market a fluctuating one, irrespective of natural conditions.

OIL OF ORANGE.

Sweet orange oil is produced both in Sicily and in Calabria, but nearly all the bitter variety comes from the latter region. The season for expressing the bitter orange oil has now just commenced.

The amount of orange oil produced varies greatly from year to year, being largely dependent upon the demand for fresh oranges. These are shipped in boxes or, for the poorer grades, in carload lots in bulk, the latter being chiefly to Germany, Austria and Switzerland. Should prices for fresh oranges rule too low for profitable transactions, then more orange oil is manufactured. In some seasons, when the market for fresh fruit has been particularly good, the making of oil has ceased almost entirely. On this account it is particularly difficult to forecast the amount of orange oil which will be produced in any season. It is thought, however, that this season's product will somewhat exceed that of last year unless an unexpected brisk demand for fresh oranges should arise. The qual-

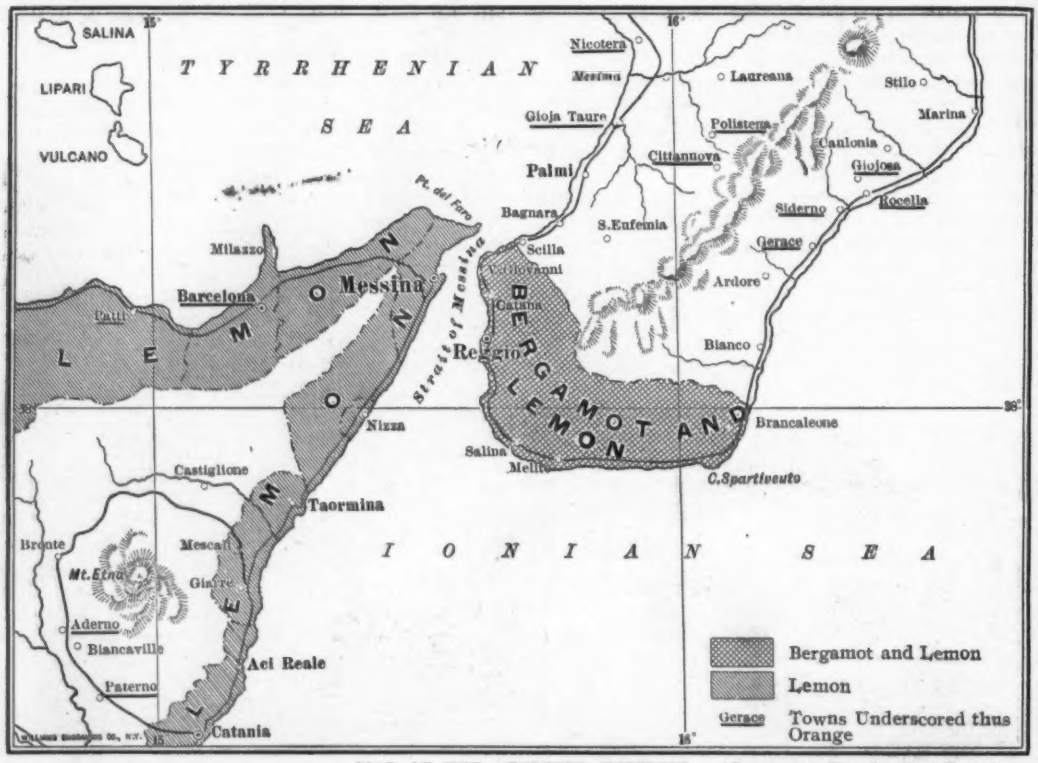
Ruins of the American Consulate.

SEA FRONT AT MESSINA.

ity of oil this year for both the sweet and bitter varieties is good.

The present price (December 7) for orange oil for export to the United States is from $1.45 to $1.50 c. i. f. New York. This is a very low price for good orange oil, and it is more probable that the price will advance rather than recede.

The reason for the present low price may be briefly summarized as follows: Last year manufacturers and speculators bought largely at high prices and held their stocks in the hope of a rising market. When the first of the new crop became available they were unable, however, to prevent the natural fall in prices. A certain amount of last season's oil was then thrown on the market and this further depressed rates. Always taking into account the above-mentioned special feature of a possible sudden demand for fresh fruit, it is considered probable that prices will very soon go higher—they have never been lower—when the pressure to sell has ceased or the greater amount of oil has come under the control of stronger firms who can afford to hold it.



MAP OF THE AFFECTED DISTRICT. *(Courtesy of The American Druggist.)*

LEMON OIL.

Although impossible to estimate exactly the probable amount of lemon oil to be produced, this season will far exceed that of last year. This increase may amount to 20 per cent, but owing to the unknown result of the control of the "Camera Agrumaria" (Citrus Fruit Chamber) the conditions are peculiar this year. Hitherto advances have always been made by the merchants to the small manufacturers to enable them to pay working expenses. This year, for the first time, such advances have been stopped, and no one knows exactly what the effect upon the production will be by the end of the season. The small manufacturer, no longer able to secure the customary advances, is under constant pressure to sell, and the market has dropped as a natural result. It is too early to determine what the effect may be upon lemon oil, but it may be inferred from the present situation in the citrate of lime market. In this the "Camera Agrumaria" has fixed the artificial price of 481 lire ($92.83) per pipe, while it is freely offered here at about 100 lire ($19.3) less. The Camera tax—a tax for analysis—is figured at 60 centesimi for each degree of citric acid, the standard being 64°. The tax then on a pipe of citrate of 305 kilos would be 60x64x 305, and the product divided by 100, or lire 117.12 ($22.61). Exporters are now purchasing citrate at a price plus the tax.

The last season closed with about 100,000 pounds of lemon oil on hand. This rather large stock, together with the expected increased production of the present season, has brought prices rather low. The present price (December 7) for export to the United States is 60 cents per pound c. i. f. New York.

So far the oil from the new crop is rather inferior in quality to that of last season. This fact may be in part attributed to the prolonged drought of the past summer, which has retarded the growth of the fruit. It is hoped, as the season advances, that the quality will improve.

PEACH, APRICOT AND PRUNE KERNELS AS BY-PRODUCTS

By Frank Rabak, Expert, Drug Plant Investigation.

(*Continued from December issue.*)

The percentage yields of oils in the several cases, although varying to a certain extent, are amply sufficient to warrant extraction commercially. Sweet and bitter almonds contain a slightly higher percentage of fixed oil, which is especially noticeable in the case of sweet almonds.

The specific gravity of the oils examined are practically identical, the greatest difference being but 0.001, which is within the limit of experimental error. As a rule the specific gravities of oils bear some relationship to their composition.

The color, odor and taste, as well as the congealing temperature and solubility, reveal no broad differences. The congealing point, being a factor which might be materially influenced by any great differences in composition, is especially useful in the detection of adulterations with oils of an entirely distinct type. None of the oils congealed at 16 deg. C., remaining clear and viscid, the observations differing on this score from those made abroad.

Considering all points of similarity and dissimilarity in the physical properties of the fixed oils from these kernels, any line of demarcation which might be drawn seems rather obscure, the physical properties of the almond oils being so minutely varied as not to indicate any radical variation in composition.

CHEMICAL EXAMINATION.

With a view to making a chemical comparison of the oils, several of the more important so-called chemical constants were determined for each of the oils of peach, apricot, prune, and sweet and bitter almond kernels. For purposes of better illustration, these chemical constants are presented in Table II, thus facilitating a ready means of discrimination between the individual members.

FREE FATTY ACIDS.

The free fatty acids of an oil, although not an indication of its value, are nevertheless an index of age or rancidity, and hence become a partial factor in the qualitative valuation of a fixed oil.

Almost without exception, unless the strictest precautions are observed to protect an oil from light and air, the free fatty acids increase with the age of the oil. Even an oil kept in partially filled bottles or containers will be acted upon by the oxygen of the air inclosed, with the aid of light, producing a liberation of free acid; or, in other words, the glycerin esters of fatty acids suffer decomposition with the liberation of the free acid and glycerin.

The free fatty acids were determined by neutralizing carefully a weighed quantity of the oil mixed with alcohol with N/10 potassium hydroxid V. S. and noting the number of cubic centimeters of the alkali consumed, using phenolphthalein as an indicator.

The number of milligrams of potassium hydroxid consumed by one gram of the fixed oil represents the acid number of the oil. From the amount of potassium hydroxid consumed the percentage of oleic acid which that amount represents was calculated from the oleic acid factor (1 c. c. N/10 KOH = .0280 gm. oleic acid).

By reference to Table II the fact that all fresh oils possess but little acidity is clearly evident, as the fresh oils from peach, apricot and prune kernels, and the sweet and bitter almond oils, show a minimum of 0.32 per cent. and a maximum of 0.955 per cent. of free acid calculated as oleic acid. Noteworthy here, also, is the abnormally high acidity of the apricot oil taken after standing for a period of one year in a half-filled bottle and only fairly protected from light, the acidity having been multiplied by 17.5. Attention is also called to the acidity of the sweet almond oil purchased on the market, which possesses about five times the acidity of the freshly extracted oil and which serves in a measure to indicate that the oil was slightly aged.

The percentages of free acid in the oils freshly extracted from peach, apricot and prune kernels, as may be seen, vary but slightly from those of the oils of either sweet or bitter almonds, which seems to indicate that as far as free acidity is concerned they are comparable to a high degree.

SAPONIFICATION VALUE.

The saponification value of a fatty oil, while not expressing a direct measure of the quality of an oil, does become an important and influential factor in the judgment against other oils and as a basis of comparison of several fatty oils.

The saponification numbers, or Koettstoerfer numbers, were determined according to the method prescribed by the United States Pharmacopœia,[19] which consists in heating on a water bath for a half hour a weighed quantity of oil with a measured volume of alcoholic potassium hydroxid and titrating back the excess of alkali by means of half-normal hydrochloric acid. In this manner the amount of potassium hydroxid decomposed by reaction is readily calculated. The saponification number represents the number of milligrams of potassium hydroxid required to saponify completely the fatty acid esters or glycerids in one gram of oil.

Peach, apricot and prune kernel oils compare, as may be seen, more or less favorably with the oils from sweet and bitter almonds in saponification values. The oil from prune kernels shows a value somewhat lower than the several other oils, the sweet almond oil being most nearly associated with it; on the other hand, peach kernel and bitter almond oil are practically identical in saponification values. The oil of apricots is slightly above and in fairly close relationship to the sweet almond oil purchased on the market.

The United States Pharmacopœia[20] requires for the expressed oil of almonds a saponification equivalent of 191 to 200, the oil of the market examined being the only

[19] United States Pharmacopœia, eighth revision, p. 307.

oil besides the apricot falling within the requirement, the remaining oils being below the requirement.

Although no preference can be given to an oil on account of the saponification equivalent, it tends to show that the composition of the oils are related at least in the percentage of saponifiable glycerin salts of fatty acids.

IODIN ABSORPTION.

Of somewhat greater significance is the power of fatty oil to absorb iodin, usually termed iodin absorption or iodin number. The iodin number represents the percentage of iodin absorbed by a fatty oil under certain conditions. The iodin value is dependent upon the amount of unsaturated fatty acids in the oils. The most common unsaturated acid occurring in animal or vegetable oils is oleic acid, which is present in the oil only to a small extent as the free acid, but generally as the glycerid olein. These unsaturated fatty acids or glycerids combine directly with iodin or bromin, and upon this property is based the method employed so extensively in the quantitative examination of fixed oils. The iodin number is therefore a measure of the unsaturated acids present in a fixed oil.

The iodin absorption power was determined according to the United States Pharmacopœia,[82] the principle of the method depending upon the absorption of iodin by the oil, the amount taken up being determined by titration of the excess by means of N/10 sodium thiosulphate V. S.

The iodin values of the various oils indicate a close relationship to the almond oils. The oil from apricot and prune kernels and the three almond oils are very similar, whereas the peach oil indicates only a slightly higher percentage of unsaturated fatty acids.

It is of interest to note at this point that the apricot oil, after being aged for one year, shows an increase in iodin number, indicating that the amount of unsaturated acids has increased while the saponification value has decreased, owing possibly to the liberation of a considerable amount of free acids.

COMPARISON WITH ALLIED FIXED OILS.

While it is impossible to assert from a careful scrutiny of the above data that the oils of peach, apricot and prune kernels are in every way equal to those obtained from almonds, it is reasonably safe to state that the oils are not radically different from them. The botanical and physical similarities of the trees and their products are substantially upheld by the exceedingly close similarity from a chemical viewpoint. The differences observed are, however, not sufficiently marked to justify a statement of superiority of one over the other.

In all cases the range of differences is comparatively small, and only in the prune-kernel oil are the chemical constants at all noticeably dissimilar. The fact that the prune-kernel oil behaves slightly unlike the other members can no doubt be accounted for from the fact that, according to the statements of the suppliers of these kernels, the prunes are subjected to heat during the process of pitting or before. This is necessary because of the difficulty which is experienced in separating the fleshy sarcocarp from the pits. The application of this heat, even if not excessive, would be injurious in its action on the fixed oil in the seeds.

[82] United States Pharmacopœia, eighth revision, p. 527.
[83] United States Pharmacopœia, eighth revision, p. 307.

The relationships, both physical and chemical, between the fixed oils from apricot, peach and prune kernels, and the oils of almonds, bitter and sweet, are of the closest, and in several instances the oils practically coincide with each other. Just where a dividing line could be drawn is rather obscure. It therefore seems entirely reasonable, in view of these likenesses, to use these fixed oils in the same manner as the oils obtained from the sweet and the bitter almond.

COMMERCIAL VALUE.

In commerce the oils of almond kernels and also the oils of peach and apricot kernels are used extensively both in the arts and in medicine, and in fact are often employed interchangeably.

Medicinally or pharmaceutically the oils are useful in the preparation of ointments, liniments, emulsions and other preparations; also as vehicles for the administration of other medicinal agents. McWalter[83] states that therapeutically or pharmacologically there is no distinction between the oils from peach and apricot kernels and the almond oils. Therapeutical differences, however, do exist between the almond, peach and apricot kernel oils on the one hand, and the oils from an entirely distinct source, such as rape, sesame, etc., on the other. Almond, peach, and apricot oils are sweet, non-acrid, non-acid, and yet easily saponifiable and emulsifiable, and therefore especially suited to certain uses.

The oil of prune kernels has never reached the market, owing to its undeveloped production; but there seems no reason why, as a close relative to the almond, peach and apricot oils, its use should not become commercial also, provided the pitting of prunes becomes general, with a consequent ample supply of pits.

It may also be remembered that owing to the adulterations with unrelated oils to which almond oils are subjected because of their high prices, their activity and use are unquestionably hampered. The almond oils, although no doubt still adulterated with peach and apricot kernel oils, have been in a measure entirely replaced by the substitution of these oils. When adulterated with or replaced by peach and apricot oils, their use and action are not so seriously affected, but when adulterated with such oils as rape, cotton, sesame, poppy, olive and arachis,[84] of entirely different composition, it is almost certain that contrary action and effects must be produced.

Important uses of the oils lie possibly in their great value in the preparation of toilet soaps and cosmetics. Experiments have been made in utilizing the fixed oils[85] (expressed from peach and apricot kernels) in the preparation of high-grade soaps with very satisfactory results, complete saponification, formerly a disputed point, being obtained. Hobein[86] states that almond oil makes excellent toilet soaps, which impart a most agreeable action to the skin. Schimmel & Co.[87] state that owing to the low prices at which peach-kernel oil can be offered, it has attracted much attention in the toilet-soap industry.

[84] Allen, W. E., and Brewis, E. T. Trans. Brit. Pharm. Conf., p. 359. 1900.
[85] Rept., Schimmel & Co., April, 1893, p. 8.
[86] Hobein, M. Pharm. Post, p. 787. 1892.
[87] Rept., Schimmel & Co., October, 1894, p. 6.
[88] Oil, Paint and Drug Reporter, vol. 73, No. 5, p. 32.

(*To be continued.*)

CITRAL AND ITS ANALYSIS IN TERPENELESS EXTRACT OF LEMON*

By Samuel H. Baer, B.S., PH.D., St. Louis, Mo.

You all know perfectly well that iron ore varies in its constituents with the locality in which it is found, dependent upon various geological conditions in its formation. You also know that iron ore taken from the same mine, varies in its ingredients; as analytical chemists, you also know that these various ingredients must first be determined to qualitative analysis and your subsequent method for quantitative analysis is varied with the nature of these constituents.

I mention this at the start, as too many chemists fail to take these facts in consideration, when they turn from inorganic compounds, to analyze organic mixtures, such as essential oils all are.

The location of the plant, the nature of the soil, and the weather during the ripening season, all produce in their variations, different ingredients, which more or less are factors in the analysis of these essential oils. This should be borne in mind in taking up in detail the subject before us, and should always be kept before the analyst in working out any method of analysis of citral, lemon oil and lemon extracts, or any essential oils.

What you want, and what we, the manufacturers want, is a method of analysis of terpeneless lemon extract, so that you can set a standard for terpeneless extract of lemon, and we, the manufacturers, can maintain this standard, not only to meet your views, but more important for us from a commercial standpoint, is that we can give our customers uniform extracts, at all times, and dispense with complaints from our customers regarding their non-conformity, which is far more annoying to a conscientious manufacturer, than anything else. If we can always be sure, by determining the citral content of a terpeneless lemon extract, that our terpeneless lemon extract is uniform, by a method of analysis, to be agreed upon by you, we would surely thank you, sincerely.

Terpeneless lemon extract is dependent upon its flavor primarily upon three ingredients, of which the most important is citral, then sesquiterpene (its character not determined), and lastly, geranyl acetate in the Messina oil, and limalyl acetate in the Palermo oil of lemon.

As we all agree that citral is the most important ingredient in determining terpeneless extract of lemon, I am going to go into the question in detail.

First. What is its chemical constitution.

Second. What are its physical properties.

Third. What are its chemical properties.

Fourth. Method of analysis proposed, their individual strength and weakness.

Fifth. The method proposed by Dr. E. M. Chace of your association and the result of my experiments with this method when applied to extracts of commerce.

First. Citral is the aldehyde of the empirical formula of $C_{10}H_{16}O$ and its formula as worked out by Messrs. Tiemann and Semmler is

$$CH_3.C(CH_3); CH.CH_2.CH_2.C(CH_3): CH.CHO.$$

Second. Citral is a liquid substance with a boiling point of 229° C, and specific gravity of 0.899. It is soluble two parts in a hundred parts of of 40 per cent. alcohol.

Third. The graphic formula explains its properties, for the double bond shows its unsaturated characteristic, and its decoloration with bromine and the "Cho" group shows that it is an aldehyde.

It has all the characteristics of the aldehyde.

(1) Giving by reduction an alcohol geraniol, and in turn citral is formed by oxidation of geraniol.

(2) Citral combines with the sodium bisulphite forming the sodium bisulphite compound thereof.

(3) Citral combines with phenyl hyrazine.

(4) It combines with semi-carbazine chlorohydrate.

(5) It combines with ammonia.

(6) It combines with hydroxylamine.

(7) It combines with acetone.

All these with the formation of the usual aldehyde derivatives when combined with the above substances.

Citral evidently exists in two isomeric forms, which the work of Barbier confirms, but the exact difference from a graphic formula standpoint, between these two isomers, has never been worked out. It is important, however, to know that these two isomers exist, for if we are going later to use a colorimetric method for the determination of citral, we want to be sure that this colorimetric analysis tells the full story. I need not recall to you all here, for you are all well-trained chemists, the distinct colorimetric difference between the two isomers of acetoacetic ether as well as many other sterio isomers, when treated with the chloride of iron.

Fourth. Citral exists to the extent of about 80 per cent. in lemon grass oil and about 4½ to 5 per cent. in lemon oil and in smaller quantities in various other oils, such as orange, mandarine and cedrene oils, etc. All the citral of commerce is prepared from lemon grass oil by the formation of the crystaline bisulphite compound, which after purification is decomposed again into citral with the use of alkali carbonate and this citral is put on the market as more or less pure citral. Most of the analyses of citral have been made on this citral, obtained from the lemon grass oil, and as far as I can learn, no determination or analysis based upon preliminary experiments upon citral, which we know is obtained from the lemon oil. This is a vital point, too, for in reading the official standards, terpeneless lemon extract must contain not less than two-tenths of a per cent. of citral, which citral must have been obtained from the oil of lemon. Citral obtained from lemon grass oil is good enough as a means of arriving at

* Read at the November, 1908, Convention of the Association of Official Agricultural Chemists.

a method of analysis, but if the manufacturer used this citral in his lemon extracts, it is against the standards established by the Department. Either the analysis of citral must be absolutely based on citral obtained from lemon oil, since we do not know whether the citral in lemon oil or in lemon grass oil are the same citral or isomers, so we cannot logically limit the standard to the use of citral obtained from lemon oil.

The first method tried was to determine the amount of citral present, by applying the cassia oil method, which method was, of course, quite logical, since citral is an aldehyde like cinnamic aldehyde of cassia oil, and should combine with sodium bisulphite to form an insoluble compound; but in view of the other aldehydes always present with citral in lemon oil, and special conditions necessary, such as the maintenance of a constant temperature and the assurance that not too much free sulphurous acid is present, which dissolves the precipitated bisulphite compound, renders this method uncertain and four persons analyzing the same oil a number of times, would get individually the same results, for they each would be able to maintain the same conditions, but the results of the various experimenters, on the same oil, would vary as much as two to three per cent. We might mention here how even the duplicates of the same analysis would vary from one to two-tenths of a per cent.

Still, I believe that this method could eventually be worked out in detail so as to make a proper determination of citral.

Garnett in 1896 published a method for the determination of citral, by the reduction of the aldehydes with sodium in alcohol and acetization of these alcohols, and the subsequent determination of the saponification number. When this came out, it looked as if this was going to be the one wanted, for we would then be able to estimate the total aldehyde contents, by the estimation of the saponification number and substract therefrom the saponification number determined prior to the reduction, which would determine the amount of esters present in the oil. The fallacy in this method was that the reduction in sodium of alcohol, and the aldehyde does not take place quantitatively, and is, therefore, useless; but it is my opinion that a careful experimenter could find a method of reduction which would accomplish this.

Probably one of the best methods discovered is the one by Walther, treating the alcohol solution of lemon oil with the hydroxylamine hydrochloride and sodium bicarbonate forming the citral oxime and then, titrating back the excess of the hydroxylamine hydrochloride with one-tenth normal soda solution. This method, if it could be worked out accurately, would be the right one to use, for you actually convert the aldehydes present in the lemon oil to a crystaline body, which can be actually weighed. This method is not accurate except in experienced hands, for the sodium bicarbonate used in the reaction itself acts on the hydroxylamine hydrochloride, and the resulting analysis would be too high; here, the determination is proved useless by a small quantity of sodium bicarbonate. Then again, in the dilution of the terpeneless extract of lemon, it would be a question if it would be accurate enough for the estimation thereof. I recommend therefore, that research be instituted, for then the volumetric determination would be checked by the gravametric determination of the amount of citral oxime.

Citral also combines with pyrotartaric acid and P-napthylamine, bearing the characteristic compounds of naptho-cinchoninic acid, also citral forms compounds with semi-carbazide chlorohydrate.

These methods have been, more or less, tried with lemon oil, lemon grass oil and other oils in the determination of the amount of citral present, but what we want is a method that can be applied to the determination of small quantities of citral, around two-tenths of a per cent., such as exists in terpeneless extract of lemon. The method must necessarily be one which will not necessitate the distillation of the alcohol or water, in the extract, for in such distillation always a certain per cent. of citral is carried over with the water and alcohol.

Further, a separation of the small quantity of oil and the large quantity of alcohol and water by acidifying could be more or less incomplete.

What we want in a method of determining the citral in terpeneless oil of extract is one that will make it possible to form a compound with citral, which will precipitate entirely from the alcohol and water used in the lemon extract and which can be analyzed preferably gravimetrically.

To go over the possible method, you must first exclude those that it would be impractical to use; citral could not be combined in this case with ammonia, hydroxylamine and phenyl hydrazine as the resulting compounds, with the respective ingredients afore mentioned, are liquids.

Further, citral could not be combined with acetylacetone, for the water present would prevent the action of piperdine, for you know this is the condensing medium in the above reaction. On account of the presence of the water in the extract, I doubt if the P-napthylamine derivative could be formed.

The two compounds which in my mind could be formed would be (1) the sodium bisulphite. As you know Tiemann (Ber. 1898, page 3310) states the best method he found for making the normal sodium sulphite compound as follows:

One hundred parts of citral to be treated with three hundred parts of 33 1-3 per cent. solution of sodium bisulphite and twenty-five (25) parts of glacial acetic acid, and the conversion into normal sodium bisulphite derivatives was practically quantitative. Now, it seems to me, that by varying the amount of glacial acetic acid used conditions could be found under which the citral present in terpeneless extract of lemon would be precipitated as the normal sodium bisulphite and filtered, dried, and actually weighed. (2) Tiemann prepared (Ber. 1898, page 2315) the carbazone by treating 50 grams of lemon grass oil with 50 grams of the semi-carbazide chlorohydrate and 80 grams of sodium acetate in dilute alcohol and obtained 53 grams semi-carbazone, which shows that there was about 84 per cent. of citral in lemon grass oil. It seems to me that a like derivative could be formed and the amount of a carbazone could be quantitatively analyzed in a terpeneless extract of lemon. These two quantative methods could be worked out and one or the other used as a check upon the E. C. Chace method (colorimetric). A correct citral analysis would then be assured.

Fifth. The E. C. Chace method, as you will see from the following analysis, is not in itself accurate enough.

The following analyses were made by me with the co-operation of Mr. Weideman of the firm of Kessler & Weideman, and Mr. Shaffner, one of the chemists employed by the Blanke-Baer Chemical Company, and as the three of us could have judged all colors, we are satisfied that the analyses made are as accurate as could be made with the Chace colorimetric method.

Our Sample No. 13. 0.42% citral solution shows 0.40% citral. The citral is Schimmel & Co.'s and dissolved in Cologne spirits of 190 proof, or 95%. (By Chace method.)

Our Sample No. 10. 0.42% terpeneless oil of lemon solution shows 0.19% citral. This terpeneless oil lemon was dissolved in Cologne spirits, 190 proof or 95%, and colored with lemon peel. (By Chace method.)

Our sample No. 11. 0.42% terpeneless oil lemon solution shows 0.18% citral. This terpeneless oil lemon was dissolved in Cologne spirits, 190 proof, or 95%, and colored with tumeric. (By Chace method.)

Our sample No. 12. 0.42% terpeneless oil lemon solution shows 0.10% citral. This terpeneless oil lemon was dissolved in 38% Cologne spirits and city water and filtered through magnesia. (By Chace method.)

Our sample No. 14 shows 0.10% citral, consisting of 17 pounds oil lemon, 19 gallons Cologne spirits, 23 gallons water; colored with lemon peel.

Sample of alcohol (not Cologne spirits), 188 proof, generally used by extract manufacturers, with no citral or lemon in it, shows (by Chace method) 0.19% citral.

Sample of Cologne spirits, 190 proof, shows 0.07% citral, with no citral or lemon in it. (By Chace method.)

Sample of 50% Cologne spirits shows 0.07% citral, with city water used, with no citral or lemon in it. (By Chace method.)

Sample, same as above, shows 0.08% citral. Filtered through magnesia.

From these analyses you see that when applied to the extracts of commerce, the correct result is not obtained. On sample No. 13, we started with citral and the analysis was reasonably close; on samples No. 10 and No. 11, we started with terpeneless oil of lemon, and the low results of citral I attribute to the fact that the terpeneless oil of lemon I purchased was not pure terpeneless oil of lemon, but a terpeneless oil of lemon containing only 50% of the citral that should be there.

Most of the extract manufacturers use 188 proof alcohol, that is 94% alcohol, which always contains a certain amount of aldehydes and the sample that we tried, treating the alcohol the same as the lemon extract, showed 0.19% citral, when there was no citral there at all.

We, in our manufacture, use only Cologne spirits and the results obtained were not so far wrong, as it would for those manufacturers who use 94% alcohol.

Now, if the presence of the impurities at times in alcohol would throw the results off to such an extent, giving a higher per cent. of citral than necessary, would not it be thinkable that the impurities in the alcohol at certain times and also in the water and the very change of one or two ingredients in the lemon oil, throw off a result, reversing the analysis and showing less per cent. of citral than was really present?

The Chace method is very good, indeed, if the manufacturer was using chemically pure citral, distilled water, and aldehyde free alcohol in the manufacture of his extracts, but such ideal conditions never exist. Further, any manufacturer could discreetly add another aldehyde, even acetaldehyde, to the extent of two-tenths of a per cent., which would give all the reactions of citral in the extract of lemon by the Chace method. As mentioned above, the alcohol used is liable to contain the aldehyde impurities to the extent of two-tenths of a per cent.

Now, I do not want to state that the Chace method is impossible, but, if we can first be sure that the citral is there and estimate it quantitatively by the sodium sulphide method or carbazone method, the Chace method could be used as a check.

All I ask of you gentlemen assembled here is, that before officially accepting the Chace method, as a method of analysis, you appoint a committee from your members to test out carefully the Chace method with the conditions that the manufacturer must meet, because he cannot use aldehyde free alcohol, nor is he always in a position to use distilled water.

Further, suppose the Chace method is accurate, how would the analysis show that the citral used was obtained from lemon oil or the commercial citral obtained from lemon grass oil?

Now, gentlemen, in closing I want to assure Dr. Chace of my keen appreciation of his work, which shows, undoubtedly, his skill as a chemist, but I wanted merely to call your and his attention to conditions the manufacturers have to meet, and where his method of analysis must necessarily fail.

CASSIE.

ITS ORIGIN, CULTIVATION AND HARVEST.

By L. Mazuyer.

ORIGIN, BOTANICAL CHARACTERISTICS, VARIETIES.

The cassie belongs to the Mimosa family. It is a very branchy shrub which rises to a height of from 5 to 6 meters; its branches have sharp thorns; and its few bipinnate leaves give it a nude, disagreeable appearance. Originally from India, the cassie has spread in the Provence, France, in Italy, in Algeria and in Egypt. It is indigenous to the Angolas, Australia, the Hawaiian and Philippine Islands. It is said that it was in the Palais Farnese that this species was first cultivated, whence its botannical name *Acacia Farnesiana*.

The wood of the shrub is white and very hard, and its bark is used in the tanning industry. The bark of the root, which exhales a garlic-like smell, is strongly astringent and is used as an excellent remedy in the treatment of ship fever. The seeds of the cassie are tart; they have the form of a small kidney bean and are enclosed in brown, cylindrical and arched husks. The small flowers, yellow and capitulum shaped are very odoriferous and, also, very fragile. In perfumery they are treated fresh, but suitably dried they conserve their entire aroma. They are also used for the making of valuable sachets.

The cassie shrub is cultivated in France, in Algeria and in Syria for use in perfumery. In Provence the region which this cultivated shrub covers extends over a space relatively confined. It starts at Villefranche-sur-Mer and

stops a little beyond Cannes, at La Naponte-Man de liess, and does not spread much in depth. This region counts as its principal centers Saint-Laurent-du-Var, Gagnes, Golfe-Juan, Vallawris, Le Cannet, Le Roquette and Cannes.

There grows on the Riviera a species resembling very much the acacia Fernesiana and akin to it. It is the *acacia cavenia* whose flowers are also used in perfumery. This variety, whose cultivation is more recent, is called in commercial language Roman Cassie in distinction from the other, which is known as Ancient Cassie. According to legend the original plants of Acacia Cavenia were brought to Cannes about a hundred years ago by a soldier returning from Italy. The original plants which were lost some twenty years ago were found on the Mount Suquet and the other at Croix-des-Gardes; they had reached a marvelous development, and it is claimed that in one season they furnished 150 and 100 kgs. of flowers respectively. One should regard these figures as exaggerated, but that is the legend which is always respected in the Provence.

Indus, the Roman Cassie, is more vigorous than the Ancient Cassie and, since it exacts less care than the Ancient Cassie because it is less affected by cold, it is preferred by many cultivators for its very rusticity. It is true that the flower of this less odoriferous plant is not at all prized by perfumers, who pay for it a lower price. Nevertheless, it tends to become preponderant because its crop makes up for its inferior value.

The Cultivation, Production and Uses.

The mode of cultivating is different in the two varieties of the cassie in certain respects. Both, however, thrive in a granitic soil, which is light and sandy, but they also demand a very warm exposure, especially in the warm sunlight and sheltered from the mistral.

The multiplying of the Ancient Cassie is worked by seed plots. The seed preserves its germinating qualities a very long time, but as it is surrounded by a very hard envelope, it is liable to rot or to dry up before coming up. And as it is not buried in the ground before care has been taken to soak it in a little water; when it is sufficiently puffed up, it is notched along its greater axis. The planting is done in March in a soil sheltered by a wall which reflects the warm rays of the sun. The seed comes up at the end of fifteen to twenty days, and some months after that the cassie shrub is sufficiently rooted in to be transplanted. According to their strength the plants sell at from 15 to 50 centimes. (3 to 10 cents).

The cultivators of Cannes multiply the Roman Cassie by layers. This is done in March; it is very delicate and the proportion of plants that take root is relatively small. At the end of a year they are detached to be planted for good. The price of the layers varies from 1 franc 50 centimes to 3 francs apiece. (37 to 50 cents.)

The transplantation is effected with a space of from 5 to 6 meters between each plant of the Roman Cassie, and from 2 to 2½ between each plant of the Ancient Cassie.

It frequently happens that the Roman Cassie is grafted on the Ancient Cassie. The grafting is done in the budding in spring, when the last colds have passed and generally succeeds fairly well.

The one and the other require little manuring; it is well, however, to fertilize them, and certain cultivators do this every two years, using horse manure if the soil is moist, and the cow dung if the soil is dry. The latter is said to better retain the moisture. The soil is watered but little; still it is necessary, for a soil too dry prevents the roots from developing completely, and makes the shrub decline soon.

Each year, in March, the Ancient Cassie is trimmed in a manner so as to leave only a dozen, or, at most, fifteen shoots. The choice of a suitable time to do this demands, according to the growers, much circumspection; it is necessary to wait for the end of the vegetation and to prevent the *sprouting of the summer*, correct but ambiguous perhaps, otherwise the sap driven back, not finding room to spread out, is forced back to the trunk and stifles the growth of the bush. The Roman Cassie, on the other hand, is not trimmed. This is the cause of a late blowing time, and explains, too, the volume attained by the plant which becomes immediately a thick bush. Rustic, (in its nature) it does not fear the cold, which is certainly never severe in our climate, while the other variety is very sensitive. For the latter are reserved the best exposures. The duration of the Cassie shrubs is very long; some plants more than half a century old are often still very vigorous. As to diseases that affect them, nothing specific is known. It has been noticed, however, that certain parasites live on the gum which the shrub secrets. This secretion of gum is not astonishing, if one remembers that this shrub belongs to the Mimosa family which counts besides trees producing gum tragacanth, and gum arabic, copaifera officiualis, balsam of copaiba, the dipterocarpus incanus, balsam of gurjien, the Myroxylon pereiroe, balsam of peru, balsam of Toolouse. According to M. E. de Wildemann, the gum of the cassie shrub is gathered in certain countries where it displaces advantageously the gum arabic. Often these parasites, which appear in the form of white vermin, are carried by ants to the top of the branches, where they become very voracious for the young shoots.

From the very first summer following the transplanting, the bush yields flowers, but it is toward the fifth year that it is in *full bloom*. The flowering time of the Ancient Cassie begins in September and ends about Christmas, while for the Roman Cassie it is continued in April or May to the beginning of summer when already the first buds of the flower of the orange tree appear. However, a slight arrest of floressence is manifested through January and the beginning of February. This makes two distinct crops, the autumn crop and the summer crop. The cassie is picked every two or there days, at the rate of 50 centimes for a kg. A woman can pick from 6 to 7 kg. a day. An Ancient Cassie shrub of mean strength yields about 600 gr. of flowers during its season, while the Roman Cassie shrub may yield double that amount and more sometimes. In ordinary seasons, the average price varies from 5 to 6 francs a kg. of the flowers of the former, and from 2 to 3 francs for the latter. One can judge by this how fraud is tempting; it is moreover facilitated by the very great similarity that exists between the flowers of the two varieties. It is pretty difficult for one who has no expert knowledge to differentiate them, especially when in full flower. Indus, a mixture of the two varieties, is very difficult to detect, for there are no well defined distinct characteristics which enable to identify, on the moment, the one from the other.

(To be Continued.)

TRADE NOTES

Messrs. Adolph M. Spiehler and Oscar B. Spiehler of Rochester, N. Y., were recent visitors to New York, looking happy and prosperous.

The soap factory at the Elmira (N. Y.) Reformatory was damaged by fire at 5.30 a. m. December 29th last. The loss was about $2,000.

Mr. Edgar A. Weber is now representing W. J. Bush & Co., Inc., New York, at 185 E. Kenzie street, Chicago.

Thos. Herson & Co.'s soap factory, New Bedford, Mass., was destroyed by fire January 7th. The loss was about $25,000, nearly covered by insurance.

The second annual vaudeville and dance of the Drug Club of Philadelphia was held at the Bellevue-Stratford Hotel on the evening of January 11th.

Mr. A. A. Booth, perfumer for Vantine & Co., New York, has returned to his laboratory again in good health after a recent period of illness.

According to the Martinsburg (W. Va.) *Journal,* Matern Gerbig, a soap manufacturer of that city, has alienated the affections of Martha J. Brechler's husband. She claims $20,000 damages. *Details* have not yet appeared in print.

Louis R. Fiebert, of No. 140 Essex street, New York, buyer and seller of perfumeries, has filed a petition in bankruptcy, with liabilities of $11,200, to three creditors, on bond and mortgages on Nos. 103-105 Butler street, Brooklyn. He has no assets.

Judge Rogers on December 18, 1909, appointed W. G. Brossman receiver for the Brown Soap Company, Columbus, O., under $20,000 bond. The application was filed by W. S. S. Rodgers, who stated that he was surety for $3,000 due and unpaid, and there were other creditors.

We have received an announcement of the marriage of Charles Frederick Schmid to Martha Barbara Meyer, which was solemnized on Monday, January 4th, at the home of the bride's parents, Brooklyn, N. Y. Mr. Schmid is a son of Julius Schmid, who for the past 26 years has supplied American perfumers with bottle-capping material.

Lina Cavalieri, a well-known opera singer, is the latest to have found the secret formula book of an ancient Italian perfumer, whose marvelous products were responsible for the youthful complexions of superannuated beauties. She has opened a perfumery emporium at 240 Fifth avenue, New York, and another in Paris, where she will show society dames how to rival the beauty of Mme. Cavalieri herself.

Messrs. Alfred E. Bruns, sales manager, and Charles E. C. Roberts, general representative, have severed their connection with the American Stopper Co., Brooklyn, N. Y. Messrs. Bruns and Roberts have not yet announced their plans for the future, but we hope to be in possession of the facts, that will enable us to advise our readers, in our next issue, just what these gentlemen may propose to offer to the trade.

The wedding of William Ottman and Miss Madeline Louise Ehret, a daughter of George Ehret, took place at 6 p. m. January 14th, at the residence of the bride's father, 1197 Park avenue, New York. Mgr. Lammel of St. Joseph's Church and the Rev. Father Pardow of St. Ignatius Loyola performed the ceremony. Mr. Ottman is president of the Ottman Lithographing Co., 1431 Broadway, New York.

At this time of the year it is agreeable to find a paste that does not freeze in transit. Such an article is offered by the Arabol Manufacturing Company, No. 100 William street, New York, whose condensed paste powder is most convenient to ship and handle. Besides, the consumer pays only for the effective material in the paste and not for water, as in ready-made pastes, which cause a considerable reduction in the expense of freight. Its weight is only one-eighteenth of the mixed compound. It is prepared for use in less than a minute.

Mr. Charles Alker, manager of the National Aniline and Chemical Co.'s essential oil department, is usually a very calm gentleman, even in times of stress, but his temper must have been sorely tried the morning after the Messina earthquake, by a persistent customer. This party was evidently badly in need of lemon oil, and when told that the local market was practically bare he urged Alker to cable to Messina for an immediate shipment. That was "2 mutch" for our mutual friend, who yelled back through the telephone:

"You —— fool, how do you expect to get any lemon oil when the people in Messina are running around without any clothes on?"

Then he hung up his receiver.

On page xv of this issue appears the full-page advertisement of the Brass Goods Mfg. Co., Brooklyn, N. Y. They were established in 1876 by Herbert O. Hyatt, president and treasurer, and Frank S. Hyatt, secretary. The advertisement tells its own story, and it only remains for us to add that this concern is one of the largest in its line. The roster of the Manufacturing Perfumers' Association lists the company as an associate member.

Pages iii and iv of this issue are composed of an insert devoted to the scented advertisement of Van Dyk & Co., New York. This method has been hailed as the first new note in advertising by prominent advertising men in New York, and so favorably has it been regarded that a prominent manufacturing perfumer is negotiating with us for the right to use the scheme in putting his products before the public through the medium of general magazines. The publishers of this journal have applied for a patent.

One of the largest soap plant mergers ever put through in Ohio was consummated on December 18, 1908, when the Remmers Soap Company absorbed the Eureka Soap Company.

The Remmers Soap Company is a corporation with a capital stock of $300,000, located at 1456-1460 Harrison avenue. The directors of the plant are Richard W. Neff, W. S. Keith, W. H. Harrison, J. C. Short and J. S. Conner.

The Remmers Soap Company will abandon its plant and move into that occupied by the Eureka. The latter concern was the second largest of its kind in Ohio and was capitalized at $200,000.

The plant is a new one, having been built but a few years, and is located at 2261-2275 Spring Grove avenue. It has a frontage in Spring Grove avenue of 185 feet and runs back to Puck street, a distance of 145 feet. There are four buildings, the largest of which is 110 by 160 feet. The structures are used for power building, general plant, shipping rooms and stable.

The officers of the Eureka Soap Company were F. S. Goshorn, president; Charles Schmitt, secretary, and Anthony Schmitt, treasurer. The new plant will have an output of $500,000 per year.

Mr. T. W. Stemmler, of T. W. Stemmler & Co., 366-368 W. 11th street, New York, returned recently from a European trip, and he reports that he has secured the American agencies of Pelissier-Aragon, Grasse, France, and Flora S. A. Fabrique de. Produits Chiniques, Dübendorf (near Zurich), Switzerland. Pelissier-Aragon are manufacturers of essential oils, pomades, liquid flower concretes, floral waters, olive oil, etc., and were established in 1850; they have agencies in the principal cities of the world. Flora S. A. is now controlled by Dr. A. Corti, a well-known Swiss chemist. Its catalogue describes a complete line of artificial perfume and soap materials. T. W. Stemmler & Co. are also agents for Petko Iv. Orozoff et Fils, of Orozoff and Kazanlik, Bulgaria, producers of Otto of Rose. That house has issued a very handsome and scientifically valuable booklet entitled "The Rose—Its History," as reported in these columns several months ago. Mr. Stemmler is well known in general importing circles in New York, but of special interest is the fact that he introduced Houbigant's perfumes into this country. He made a conspicuous success of his business and was thus enabled to retire with a competence in 1896 at the early age of 40 years. He is giving his personal attention to the business just now to establish his son, Mr. Theodore W. Stemmler, Jr., who has devoted himself to the perfume material agencies since last August, in New York and vicinity.

Publications, Circulars, etc., Received.

The Mühlethaler, of Nyon, Switz., and Grasse, France, has sent us the handsomest and most ingenious card of greeting that has come to our editorial desk. On this card, which measures 5 in. x 9 in., is embossed a life-size, full-blown rose, together with a bud and a number of very natural appearing leaves on the same stem. These have been colored by hand, and would almost deceive one at first glance. The rose and bud are of some absorbent material *appliqued* to the card, and the natural fragrance is well simulated by the Th. Mühlethaler's synthetic *Rose Alpine.* To the *Souhacts Sincères,* we gratefully respond.

Jeancard Fils & Co., Cannes, France, send us their January, 1909, price list. A feature of special interest in the make-up of this list is the scientific data given opposite the name of most of the natural and synthetic articles.

George Lueders & Co., New York, issued on Jan. 4 a circular dealing with Messina essences and olive oil. The situation on that date, and the probabilities for the future in regard to these oils, were admirably set forth.

W. J. Bush & Co., Inc., New York, January price list contains a special notice advising the trade that although the prices quoted are withdrawn on account of the Messina disaster, they will do their utmost to safeguard the interests of their customers.

Ungerer & Co., New York, price list devotes special attention to synthetic violets made by Christ, Naef & Co., Geneva, Switz., and to Jeancard Fils & Co.'s oil lavender and rosemary. On the back cover appear a historical sketch of The House of Pappazoglou.

The Evergreen Chemical Co., 194 Broadway, New York, was established in 1898 to manufacture perfumes and colors. They are also sole agents for Emile Longchamp, Grasse, France, who is described in the booklet we have received, as a manufacturer of concentrated flower oils, or perfume bases. This booklet contains formulas for a number of toilet preparations and directions for perfuming same with the concentrated flower oils. Special attention is called to the use of these oils for the manufacture of perfumes, the addition of cologne spirit and water being all that is necessary. The company furnishes labels, also, making it a simple matter for anyone in a position to sell the goods, to establish himself in the perfumery business.

The semi-annual report of Schimmel & Co. (Fritzsche Brothers), Miltitz, near Leipzig, Germany, dated November, 1908, is at hand. After a general introduction, including a resumé of the world's producing centers and consuming markets, the report deals with the following subjects:

Commercial notes and scientific information on essential oils.
New essential oils.
The British Pharmaceutical Codex 1907.
The French Pharmacopœia 1908.
Chemical preparations and drugs.
Notes on recent research work concerning terpenes and terpene derivatives.
Japanese Peppermint. By Naojiro Inouye.

The chapters on geranium, lavender, patchouli, peppermint (American), rose (Bulgarian), sandalwood, spike, and ylang ylang, are of special interest, and we shall devote further space to them in future issues. Under the heading Chemical Preparations and Drugs the new synthetic violet Neoviolone is referred to. The last section, entitled Japanese Peppermint, is an ex-

haustive article dealing with the product from the cultivation of the plant to the shipment of the oil. Numerous tables give statistical and scientific information of much interest.

Mr. W. G. Ungerer left New York on January 2nd, on a Western trip. He took with him Mr. O. E. Watts, one of Ungerer & Co.'s New York salesmen, to install him as Chicago manager. The following circular describing Mr. Watt's appointment has been mailed to the trade.

MR. O. E. WATTS.

Expansion Notice.

To enable us to better serve our large and growing clientele in the Middle West we have moved to more commodious quarters at 22 Fifth avenue, Chicago. Our new office will be devoted exclusively to

"The House of Ungerer."

Mr. O. E. Watts, who has been in our employ for some years and is thoroughly familiar with our line, will be in charge.

In this new branch will be carried full stocks of Jeancard Fils & Co.'s natural flower products; Chuit, Naef & Co.'s synthetics; Stafford Allen & Son's essential oils; Botu Pappazoglou & Co.'s Otto of Rose d'Or; Ozone-Vanillin Co.'s vanillin; Pierre Sicard's French olive oil; and our own complete line of other specialties, drugs, etc., for perfumers, soap makers, flavoring extract manufacturers, etc.

We are now in a better position than ever to make prompt and complete shipment of all goods used by our patrons in the Middle West, and we therefore anticipate a continued demonstration of their appreciation of our efsorts to serve them.

With sincere wishes to all our friends for a happy and prosperous year, we are

Respectfully,

UNGERER & Co.,
273 Pearl Street, New York.

514 Arch Street, Philadelphia, Pa.
22 Fifth Avenue, Chicago, Ill.

NEW INCORPORATIONS.

The Cleanso Specialty Co., Cambridge, Mass.; manufacturing and sale of "Cleanso" and other cleansing fluids, pastes, etc.; capital, $50,000. President, W. H. Reid; treasurer, A. B. Reid, Cambridge.

Victoria Antiseptic Compound Co., New York; to manufacture substances to cleanse and beautify the human skin; capital, $20,000. Incorporators: Hyman H. Levy, No. 155 West Forty-seventh street; Theodore Kanter, No. 268 West Forty-third street, both of New York; William Noss, No. 347 Dean street, Brooklyn.

The Buckeye Manufacturing Co., of Lisbon, O., recently incorporated with a capital stock of $10,000, has completed its organization by the election of the following officers: F. C. Chamberlain, president; G. V. Hill, vice-president; H. E. Marsden, secretary and treasurer; W. L. Clemmons, general sales manager. The firm will manufacture cleaning compound.

The American Floral Perfume Co., Toronto, Ont., has been incorporated at St. John with a capital of $50,000. They are Canadian distributors for John Blocki & Son, Chicago.

The Banner Oil Co., 2 South Clark street, Chicago; oils, lubricants, soap, etc.; capital, $2,500. Incorporators, Thos. E. Peterson, John F. Power, Edward Byrnes.

F. E. Morris & Co. (incorporated) have obtained a charter at Dover, Del., to manufacture soaps, soap powders and accessories. The incorporators are Julian C. Walker, of Wilmington; Floyd E. Monroe and Joseph Levy, of Philadelphia. The capital stock is $25,000.

Cozette Co., Brooklyn, N. Y.; to manufacture perfumes, dress shields, soaps and toilet articles; capital, $1,000. Incorporators, Benjamin I. Mott and Marie L. Mott, No. 130 Lenox road; Charles C. Wright, No. 580-A Quincy street, all of Brooklyn.

Lipset Pharmacy, New York; to manufacture drugs, toilet articles and medicines; capital, $5,000. Incorporators, Alter M. Brody, No. 4 East Forty-second street; Herman Mishkin, No. 457 Fifth avenue, both of New York; Ignatz Miller, No. 59 North Bath avenue, Long Branch, N. J.

John H. Woodbury, New York; to manufacture toilet preparations; capital, $1,000. Incorporators, John H. Woodbury, Seagate, N. Y.; David Patterson, No. 1064 Jefferson avenue, Brooklyn; Payton R. McCargo, No. 633 West 135th street, New York.

The Mansfield Specialty Co., Buffalo, N. Y. The capital stock is $5,000. Ink, glue and perfumery will be among the things manufactured.

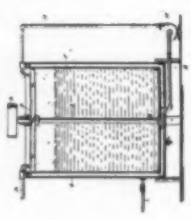
Bacorn Co., Elmira, N. Y.; to manufacture food products, extracts, toilet preparations; capital, $10,000. Incorporators, Garrett E. Bacorn, Olive A. Bacorn, Louis M. Dean, Elmira.

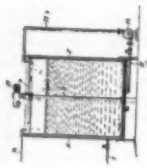
Parker-True Co., Lewiston, Me.; to make toilet articles; capital, $10,000. President, E. C. True.

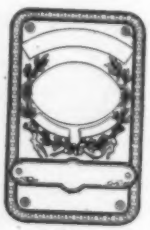
Associated Manufacturing Co., Newark, N. J.; to manufacture soap; also dry goods, laces, white goods, linens, etc.; capital, $100,000. Incorporators: Joseph Parisi, James A. Bun, New York; Robert F. Whelan, Brooklyn.

"Long Acre" Cold Cream Company, New York, N. Y., drugs and medicines; capital, $5,000. Incorporators: John W. Ferrier, Susie T. Ferrier, Willard J. Ferrier, Tompkinsville, N. Y.

PATENTS, TRADE-MARKS, ETC,







"MORRON" 37126

L'Aiglon 37277

Skaal 37229

GENEE 37479

Fanrita 37482

Solvolith 31055

DEFIANCE 33654

Jeunesse Dorée 37673

Prezioso 37230

Jockey Club 37276

BEBE 37223

Geysha 37273

4 K's Keep Kool Kamfor Kream 36399

"FISHING GIRL BRAND" 36576

LeMarquis 37224

OVELRO 38536

La Grisette 37274

MEADES HUMMER SOAP. 36494

NEOVIOLON 35324

NOVOVIOL 36171

NOVOVIOLON 36173

REGINA 39037

PERSIL 38336

DENTYNE 38406

MUM 38770

Imperion 38698

NOTE TO READERS

This Department is conducted under the general supervision of Samuel E. Darby, Esq., Patent and Trade-Mark Attorney, 220 Broadway, New York, formerly Chief Clerk and Examiner, U. S. Patent Office. This report of patents, trade marks, labels and designs is compiled from the official records of the Patent Office in Washington, D. C. We include everything relating to the four co-ordinate branches of the essential oil industry, viz.: PERFUMES, SOAP, FLAVORING EXTRACTS and TOILET PREPARATIONS.

The trade marks illustrated are described under the heading "Trade Marks Applied For," and are those for which registration has been *allowed*, but not yet *issued*. All protests for infringement, etc., should be made promptly to the Commissioner of Patents, Washington, D. C.

All inquiries relating to patents, trade marks, labels, copyrights, etc., will receive Mr. Darby's attention if addressed to

PATENT AND TRADE MARK DEPT.,
Perfumer Pub. Co.,
100 William St., New York.

PATENTS GRANTED.

908,951.—METHOD OF MANUFACTURE OF ROSIN SOAP AND THE LIKE.—Anderson W. Carmichael, Savannah Ga. Filed Oct. 16, 1907. Serial No. 397,652.

1. The herein-described method of producing hard rosin soap, which consists in heating a saponified solution of rosin and striking the foam rising at the surface of said solution to break the bubbles and liberate the vapor.

2. The herein-described method of producing hard rosin soap, which consists in heating a saponified solution of rosin, beating down the foam rising at the surface of said solution to liberate the vapor and prevent the overflow of the foam, and withdrawing said solution from the under surface and discharging it over the surface thereof.

3. The herein described method of producing hard rosin soap, which consists in heating within a vessel a saponified solution of rosin, beating down the foam rising at the surface of said solution to liberate the vapor and prevent the foam from overflowing the vessel, and withdrawing said solution from the bottom of the vessel and discharging it therein over the surface of the solution.

909,058.—APPARATUS FOR THE MANUFACTURE OF ROSIN SOAP AND THE LIKE.—Anderson W. Carmichael, Savannah, Ga. Original application filed Oct. 16, 1907. Serial No. 397,652. Divided and this application filed Jan. 8, 1908. Serial No. 409,865.

2. In an apparatus of the character described, a vessel having a steam jacket, a foam beater revolubly mounted in the vessel near the top thereof, and means for pumping a solution from the bottom of the vessel and discharging it therein above said beater.

3. An apparatus of the character described, comprising a vessel adapted to contain a solution for the manufacture of soap and to have heat applied thereto, a foam beater mounted in the vessel above the normal level of the solution, and means for withdrawing the solution from the bottom of the vessel and discharging at the top thereof over the beater.

TRADE MARKS REGISTERED.

71,873.—Soap.—Enterprise Soap Works, Nashville, Tenn. Filed June 17, 1908. Serial No. 35,450. Published October 20, 1908.

71,878.—Medicinal Soap.—George F. Smith, Woodsboro, Md. Filed September 12, 1908. Serial No. 37,334. Published October 20, 1908.

71,891.—California Olives and California Olive Oil.—Seneca G. Dorr, Los Angeles, Cal. Filed June 15, 1908. Serial No. 35,390. Published October 20, 1908.

71,907.—Dental Paste.—Cora E. Hopkins, Philadelphia, Pa. Filed September 16, 1908. Serial No. 37,414. Published October 20, 1908.

71,914.—Cold-Creams and Pomades Containing Wool-Suint.—Vereinigte Chemische Werke Aktiengesellschaft, Charlottenburg, Germany. Filed October 24, 1905. Serial No. 13,887. Published May 26, 1908.

71,962.—Toilet-Soap Paste.—Frederick E. Frost, Worcester, Mass. Filed August 9, 1906. Serial No. 21,432. Published December 10, 1907.

71,963.—Scouring Soap.—The Harral Soap Co., New York, N. Y. Filed February 13, 1908. Serial No. 32,747. Published October 20, 1908.

71,981.—Liquid Preparation for Use as a Scalp Tonic.—The Knowlton Danderine Co., Chicago, Ill. Filed January 30, 1908. Serial No. 32,489. Published October 20, 1908.

72,011.—Face Powders and Face Creams.—John A. Schmitz, Chicago, Ill. Filed June 2, 1908. Serial No. 35,081. Published July 14, 1908.

72,024.—Soap.—J. G. Haas Soap Co., St. Louis, Mo. Filed April 10, 1905. Serial No. 962. Published June 16, 1908.

72,097.—Certain Food-Flavors.—John S. Ziegler, Chicago, Ill. Filed May 15, 1908. Serial No. 34,758. Published November 3, 1908.

72,186.—Flavoring Extracts, Vanilla and Lemon Flavoring Compounds.—C. L. Cotton Perfume & Extract Co., Earlville, N. Y. Filed March 9, 1908. Serial No. 33,266. Published May 5, 1908.

72,190.—Hair-Tonic.—George F. Gehring, Louisville, Ky. Filed September 20, 1907. Serial No. 30,098. Published May 12, 1908.

72,194.—Scouring Soap Containing Grit.—Joseph T. O'Connor Co., New York, N. Y. Filed April 16, 1908. Serial No. 34,145. Published November 3, 1908.

72,238.—Perfumes and Toilet Waters.—A. J. Hilbert & Co., Inc., Milwaukee, Wis. Filed May 28, 1908. Serial No. 35,014. Published July 14, 1908.

72,240.—Detergent Washing Compound.—Henry F. Blakeley, Bridgeport, Conn. Filed August 26, 1908. Serial No. 36,949. Published November 10, 1908.

72,263.—Soaps.—Joseph W. Wilbur, Decatur, Ill. Filed August 6, 1908. Serial No. 36,517. Published November 10, 1908.

LABELS REGISTERED.

14,569.—Title: "Corylopsis." (For Talcum Powder.) Calisher & Co., New York, N. Y. Filed November 20, 1908.

14,577.—Title: "Freeman's Violet Talcum." (For Talcum Powder.) Freeman Perfume Co., Cincinnati, Ohio. Filed November 19, 1908.

14,588.—Title: "American Banner Soap." (For Soap.) Fitzpatrick Bros., Chicago, Ill. Filed October 20, 1908.

TRADE MARKS APPLIED FOR.

25,243.—Michigan Soap Works, Detroit, Mich. Filed Feb. 11, 1907.—Laundry Soap.

31,055.—Karl Hermann, Karlsbad, Bohemia. Filed Nov. 7, 1907.—Toothpaste.

33,654.—Western Grocer Co., Marshalltown, Iowa. Filed March 26, 1908.—Flavoring Extracts and Essences.

33,938.—Barclay & Barclay, New York, N. Y. Filed April 7, 1908.—A Medicated Preparation for the Hair, Scalp and Skin.

34,582.—Thomas M. Sayman, St. Louis, Mo. Filed May 4, 1908.—Toilet Soap.

34,847.—Henry Polinsky, Philadelphia, Pa. Filed May 20, 1908.—Italian Olive Oil.

35,324.—Schimmel & Co., Miltitz-Leipzig, Germany. Filed June 13, 1908.—Violet Perfumes.

35,615.—Solomon Marculescu, New York, N. Y. Filed June 19, 1908.—A Toilet Cream.

35,799.—George H. Dietz, Stockton, Cal. Filed June 26, 1908.—Camphor Toilet Cream.

35,849.—Christopher Dennis Griffin, San Marcos, Texas. Filed June 29, 1908.—A Hair Tonic.

36,171, 36,173.—Schimmel & Co., Militz-Leipzig, Germany. Filed July 17, 1908.—Violet Perfumes.

36,266.—James William Cheshier, Birmingham, Ala. Filed July 22, 1908.—Detergent Washing Fluids.

36,370.—The H. B. Claflin Co., New York, N. Y. Filed July 28, 1908.—Toilet Preparations and Perfume.

36,576, 37,126, 37,223, 37,224, 37,230, 37,273, 37,274, 37,276, 37,277, 37,279.—Strohmeyer & Arpe Co., New York, N. Y. Filed Sept. 9, 1908.—Olive Oil.

37,482, 37,483.—D. R. Bradley & Sons, Pleasantville and New York, N. Y. Filed Sept. 19, 1908.—Perfumes, Toilet Water, Sachet Powder, and Toilet Powder.

37,673.—The Crown Perfumery Co., London, England. Filed Sept. 29, 1908.—Perfumes.

37,858.—Charles E. Keeler, Atlantic City, N. J. Filed Oct. 7, 1908.—Cold Cream.

37,982.—Castruccio-Amestoy Co., Los Angeles, Cal. Filed Oct. 13, 1908.—Italian Olive Oil.

38,336.—The Roessler & Hasslacher Chemical Co., New York, N. Y. Filed Oct. 29, 1908.—Washing Powder having bleaching properties.

38,406.—Dentyne Mfg. Co., Long Island City, N. Y. Filed Oct. 31, 1908.—Liquid Tooth Wash, Tooth Powder, Tooth Paste, and Tooth Soap.

38,428.—Addie L. Worthing, Camden, Me. Filed Nov. 2, 1908.—A Hair Tonic.

38,494.—John Meade, Kansas City, Mo. Filed Nov. 5, 1908.—Soap.

38,538.—The Der-Mo-Tine Co., Fort Wayne, Ind. Filed Nov. 9, 1908.—Massage Cream.

38,647.—The Procter & Gamble Co., Ivorydale, Ohio; Kansas City, Kan.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Nov. 14, 1908.—Soap for Laundry Use.

38,698.—The Piso Co., Warren, Pa. Filed Nov. 16, 1908.—A Cream for the Complexion.

38,770.—Seraph J. Deal, Philadelphia, Pa. Filed Nov. 19, 1908.—Tooth Deodorants.

39,031.—Alfonso De Paul, Philadelphia, Pa. Filed Dec. 1, 1908.—Skin Cleansing Preparations.

FOREIGN CORRESPONDENCE, MARKET REPORT AND PRICES.

FRANCE.

GRASSE.—As has been stated before, the crop of jasmin has not veen very abundant. But it was prolonged beyond the usual time on account of the fine weather of the early autumn, and it was possible to complete the manufacture of this much delayed crop.

Circumstances were much less favorable for tuberose, very few of the factories being able to obtain all needs for enfleurage.

The fine weather was especially favorable for cassie, the crop of which was abundant and excellent in quality.

As to lavender, it is impossible to cover at present prices, a franc more per kilo being asked, with an upward tendency.

The stock of aspic is heavy and there is little movement.

At the last election for the Chamber of Commerce of Nice, held December 13, Messrs. Aug Merle, of Bruno-Court and Louis Roure of Roure-Bertrand Fils, were elected to that important body. At the meeting for the installation of the new members held December 28th, the following officers were elected: President, Edouard Beri; vice-presidents, Alexandre Durandy and Augustin Merle; secretary, Paul Jeancard; treasurer, Jos. Maistre. Among other matters decided at this meeting it was agreed that the recommendations to the authorities to alter the duties be approved. These duties have to do with the tariff of the United States on essential oils and olive oil, and the import duty in France upon cottonseed oil.

The Congress of Olive Growers of France was held at Toulon, December 17, and was attended by many strangers as well as the chief producers of France. One of the important matters considered was the protection of the olive trees from the flies which have done so much harm. It was generally agreed that the Cillis-Berlese process of spraying with a solution of arseniate of soda was effective, and that this poison did not enter into the oil or fruit. The efficiency of this process having been demonstrated throughly in Italy it will doubtless be generally adopted in France.

In reporting that the olive crop this year in Italy and Sicily is a total failure, the late Consul Arthur S. Cheney, of Messina, sent the following particulars, together with some observations on olive oil, his letter being dated November 4:

Never in the memory of the proverbial "oldest inhabitant" has there been such an absolute lack of production of this necessary fruit as now prevails in this district. When it is remembered how essential in the diet of every Italian olive oil is, the great importance to the entire population of a failure of the home supply may be somewhat realized. Added to this are the loss to the whole country, owing to the impossibility of securing the large income from selling in foreign markets, and the failure of the supply of common oil for home industries. Thus the crop failure this year becomes nothing less than a national misfortune.

Owing to an exceptionally mild winter in this region, with its absence of cold and rain, an unusually large number of insects were hatched out this season, especially of that destructive pest, the so-called "olive fly." The fruit was early attacked by these insects and dropped from the trees prematurely, while the few remaining olives were destroyed by the notable seven-months' drought of the past summer. In consequence the olive trees are completely bare and there are no olives and no production of olive oil.

It is a question whether existing stocks of oil, although last season's production was plentiful as well as of very good quality, will be sufficient to supply the home consumption. Probably Italy will be obliged to import substitutes for olive oil. An excellent market may be here afforded for possibly large quantities of American cotton-seed oil. It is to be hoped that American exporters may find it possible to take advantage of this unusual opportunity. The Italian import duty on cotton-seed oil is from 35.5 to 38 lire ($6.85 to $7.33) per 100 kilos (220 pounds). There is a further municipal tax which in Messina amounts to 10 lire ($1.93) per 100 kilos.

OIL PRICES AND EXPORTS.

The present prices for edible olive oil are the highest for the past ten years and they have largely increased within the current year. Thus, January and February, 1908, good olive oil was quoted at £34 ($165.27) per ton (of 1,045 kilos =2,299 pounds,) while the present price is nearly double, or £59 ($286.74) per ton f. o. b. Messina. This high price prohibits the profitable exportation of oil to the United States, since it is far above the limit at which the article is permitted free entry.

The total exports of olive oil and sulphur oil through this port for 1907 are shown in the accompanying table:

Olive oil:	Pounds.
Argentine	7,040
Australia	38,412
Belgium	83,683
Canada	5,038
China	1,848
Denmark	83,683
Egypt	4,353
Eritrea	4,665
France	85,067
Great Britain	516,945
Germany	22,893
India	761
Malta	2,796
Norway	31,453
Russia	3,839,952
Spain	266,046
Sweden	325,036
United States	910,589
Total	6,230,278

Sulphur oil:	
Austria	103,065
Belgium	629,255
Great Britain	620,524
Holland	190,344
United States	53,090
Total	1,596,278

The total value of the olive oil exported was $574,547, of which $98,854 was the share going to the United States. Of sulphur oil the total to all countries was valued at $79,648, of which $4,657 represented the American exports.

THE DOMESTIC MARKET.

ESSENTIAL OILS.

MESSINA ESSENCES.—Nothing of a definite character can be said of the local market in these oils. Those who have stock are selling only to old customers at arbitrary prices that, however, are of a somewhat uniform level. Lemon, which sold at $2.75@3.00, has receded to $2.50 in the belief that a reasonable supply of new oil will soon be coming via Palermo, and that when the Messina ruins are properly investigated no small amount of old oil will be brought to light in good condition. Bergamot is in worse shape, however, as all reports indicate that not only were stocks destroyed in Reggio and Messina, but that the plantations were also ruined. Some sales have been made upward of $10 a pound. Orange seems to be following in the wake of lemon, and quotations vary in proportion, based on prices obtaining before the earthquake. Small sales are being made at about $3.25.

PETIT GRAIN.—With a view to using this oil in place of bergamot many inquiries have caused a stiffening of prices to $3.25@3.50.

BEANS.

BOURBON VANILLA.—Advices from French sources indicate a good demand and the expectations are that a price of about $2.50 will prevail. The London auction sale is scheduled for January 20 and its outcome is likely to determine the local market. Spot goods are bringing about $2.

MEXICAN.—The rumors of a control of the primary market that we referred to in our January issue seem to have been well founded. It is now positively stated that curers controlling about 80 per cent. of the output of cuts are holding them for $2.50. Spot cuts bring $2.40@2.50.

ANGOSTURA TONKA.—These are easier, sales being made from $1.10@1.35.

SOAP MATERIALS.

Eastern soap makers are generally credited with supplies sufficient for the month, while in the West, where buyers are not so conservative, buying is brisker.

Quotations are:

Tallow, city, .05⅞ (hhds.); country, .05¾.

Grease, brown, .04¼@.04¾; yellow, .05@.05⅜.

Cottonseed Oil, crude, tanks, .33@.34; summer, yellow, prime, .41½@.42.

Cocoanut Oil, Cochin, .07½@.07¾; Ceylon, .06¾@.07.

Olive Oil, yellow, 1.45@1.50.

Olive Oil Foots, prime, .08@.08½.

Palm Oil, Lagos, .06⅛; red prime, .06.

Chemicals, borax, .05; caustic soda, 80 p. c. basis of 60 p. c., $1.90.

Rosin, first run, .21; second, .23; third, .25; fourth, .27.

Almond, Bitter.....per lb.....	$3.50
" " F. F. P. A.....	4.50
" Artificial.....	.75
" Sweet, True.....	.47-.57
" Peach-kernel	.30-.35
Amber, Crude.....	.13
" Rectified	.20
Anise	1.15
Aspic (Spike).....	1.10
Bay, Porto Rico.....	3.50
Bay	2.25
Bergamot, 37-38%	—
Bergamot, 35%	—
Birch (Sweet).....	2.00
Bois de Rose, Femelle	4.50
Cade	.20
Cajeput	.53
Camphor	.12
Caraway Seed	1.50
Cardamom	18.00
Carvol	2.45
Cassia, 75-80% 1.25-2.00	
Cedar, Leaf.....	.60
" Wood	.25
Cinnamon, Ceylon	8.00
Citronella	.28
Cloves	.80
Copaiba	1.25
Coriander -.....6.00-13.00	
Croton	.80
Cubebs	1.90
Erigeron	1.75
Eucalyptus, Australian, 70%....	.55
Fennel, Sweet	1.15
" Bitter	.75
Geranium, African	4.00
" Bourbon	3.50
" French	11.00
" Turkish	2.50
Ginger	4.50
Gingergrass	1.35
Hemlock	.60
Juniper Berries, twice rect...1.00-1.25	
Kananga, Java	4.00
Lavender, English	7.00
" Cultivated	2.50
" Fleurs, 28-30%.....	2.00
Lemon	—
Lemongrass	.90
Limes, expressed	3.00
" distilled	1.00
Linaloe	3.00
Mace, distilled	.90
Mustard, natural	4.50
" artificial	2.00
Myrbane, rect.	.12
Neroli, petale.....80.00-90.00	
" artificial	17.00
Nutmeg	.90
Orange, bitter	—
" sweet	—
Origanum	.40
Orris Root, concrete ....(oz.)	3.50-4.50
Patchouly 4-75-5.50	
Pennyroyal	2.50
Peppermint, W. C.....1.50-1.60	
Petit Grain, American.....	4.50
" " French	6.00
Pimento	2.25
Rose ..... (oz.)	5.75-6.50
Rosemary, French.....	.75
" Trieste	.65
Safrol	.50
Sandalwood, East India.....3.00-3.25	
Sassafras, artificial	.34
" natural	.70
Savin	.75-1.40
Spearmint	2.75
Spruce	.45
Tansy	4.50
Thyme, red, French.....	1.10
" white, "	1.30
Vetivert, Bourbon	8.50
" Indian	42.00
Wintergreen, artificial	.38
Wormwood	4.50
Ylang-ylang 50.00-65.00	

BEANS.

Tonka Beans, Angostura.....	1.25
Surinam	.55
Para	.30
Vanilla Beans, Mexican.....3.00-5.00	
" " Cut	2.50
" " Bourbon 2.00-2.50	
" " Tahiti 75-1.00	

SUNDRIES.

Ambergris, black .....(oz.)	20.00
" gray..... "	25.00
Civet, horns ..... "	1.75-1.85
Cologne Spirit	2.70
Cumarin	3.40-3.50
Heliotropine	1.85-2.00
Musk, Cab., pods.....(oz.)	8.00
" " grain ..... "	15.00
" Tonquin, pods..... "	18.00
" " grain..... "	22.00
" Artificial, per lb.....	1.75
Orris Root, Florentine, whole	.13
Orris Root, powdered and granulated	.16
Talc, Italian	.01⅜-.01.⅞
Terpineol	.35-.45
Vanillin .....(oz.)	.33-.35

TRADE MARKS FOR REGISTRATION IN OUR BUREAU.

We have been petitioned to register the following trade marks. Any of our readers that have good reason to protest against the issuance of our Certificate of Registration under the common law should communicate with us before February 21, 1909.

The registration of trade marks in our Bureau will serve to establish the priority of the use of such trade marks in actual commerce by the applicant.

ROSALINA

1.—The Rosalina Perfumery Co., New York, N. Y.—Filed January 14, 1909. Face powder, face cream, hair tonic, hair pomade, talcum powder, foot powder, perfume, toilet water, tooth powder, tooth paste and shaving cream.

ROYAL CASTILIAN

2.—Hill Brothers & Co., Bayonne, N. J.—Filed January 16, 1909. Toilet and shaving soaps, perfumes, hair tonic, shampoo preparations, face lotions, cold creams, massage creams, dental cream, dental powder, liquid dentifrice, toilet and sachet powders and flavoring extracts.

PURE FOOD AND DRUG NOTES.

In this section will be found all matters of interst contained in FEDERAL and STATE official reports, newspaper items, etc., relating to perfumes, flavoring, extracts, etc.

FEDERAL.

We are in receipt of the following publications of the United States Department of Agriculture.

Food Inspection Decision 101 (Benzoate of Soda).

Food Inspection Decision 102 (Entry of Vegetables Greened with Copper Salts).

Notice of Judgment Nos. 28—35.

28. Adulteration and Misbranding of Pepper.

29. Misbranding of a Drug Product (Liquid Sulphur).

30. Misbranding of a Drug Product (Oil of Pine Comp.)

31. Adulteration and Misbranding of Buckwheat Flour.

32. Misbranding of a Drug Product (Blackberries, Cascara, Wild Lemon, Castor Oil Pills, Comp.).

33. Misbranding of Maple Syrup.

34. Misbranding of Canned Peaches.

35. Misbranding of Canned Peaches.

Bulletin No. 119—Experiments on the Spoilage of Tomota Ketchup.

The cases brought recently against Reid, Murdoch & Co., of Chicago, for misbranding olive oil were dismissed by District Attorney Sims in Judge K. M. Landis' court on December 15. The Department of Agriculture came to the conclusion that the charges were unwarranted.

STATE.

KANSAS.—December, 1908, Bulletin, State Board of Health.—Drug Analyses:

Bay Rum (Superior).—Beggs Mfg. Co., Chicago. Weak in alcohol—35.6 per cent. by volume.

Essence of Peppermint.—C. A. Murdock Co., Kansas City, Mo. Contains only 0.7 per cent. oil of peppermint. Illegal.

MINNESOTA.—Andrew French, of Plainview, will succeed E. K. Slater as State Dairy and Food Commissioner. Mr. Slater has accepted a professorship in the University of Minnesota.

PENNSYLVANIA.—December, 1908, Bulletin. Prof. Chas. H. Lawall, of Philadelphia, contributes a paper on "The Retail Grocer as a Factor in the Education of the Public." He deals at length with flavoring extracts.

Lemon Flavoring Compound.—Clement M. Divine & Co., 45 South Front street, Philadelphia. Sample is far below United States standard of 5 per cent. oil lemon.

Vanilla Extract.—Chas L. Heinle Co., 2731 Kensington avenue, Philadelphia. Not a pure extract of vanilla; contains added vanilla (?).

A. Colburn & Co., 210 North Second street, Philadelphia, charged with selling adulterated lemon extract; case adjusted by paying a fine of $600 previous to date set for hearing.

Chas. L. Heinle Co., Philadelphia, charged with selling misbranded extract of vanilla; case adjusted upon the payment of $60 previous to date of hearing.

WYOMING.—Fourth Annual Report of the State Dairy, Food and Oil Commissioner, for the year ending October 1, 1908.—E. W. Burke, Commissioner, Cheyenne, Wyo. The chemist, Prof. H. G. Knight, Laramie, Wyo., reports that he examined 18 extracts, half of which were adulterated or misbranded. These illegal ones were as follows:

Vanilla Extract.—Sethness Co., Chicago, Ill. Artificially colored. Contains coumarin.

Double Strength Lemon Extract.—E. B. Miller & Co., Chicago, Ill. Alcohol, 82.38 per cent.; lemon oil, 6.55 per cent. Not double strength.

Double Strength Vanilla Extract.—E. B. Miller & Co., Chicago, Ill. Not double strength.

Lemon Flavor.—Union Mfg. & Packing Co., Salt Lake City, Utah. Alcohol, 27.55 per cent.; lemon oil, .08 per cent.

Compound Vanilla Extract.—Union Mfg. & Packing Co., Salt Lake City, Utah. Contains coumarin and vanillin.

Strawberry Color.—Chicago, Ill. Contains coal tar dye.

Superior Quality Vanilla. Chicago Extract Manufacturing Co., Chicago, Ill. Contains coal tar dye.

Red Seal Extract of Lemon. A. E. Erickson Mercantile Co., Denver, Col. Alcohol, 40.90 per cent.; lemon oil, .09 per cent.

Three Star Lemon Extract (Terpeneless). C. Shenkberg, Sioux City, Iowa. Lemon oil, .03 per cent., artificially colored.

TREASURY DECISIONS.

No. 20208.—Green Essence of Cognac—Essential Oil.—Protest 322141 of Jose Benitez. Opinion by Chamberlain, G. A.

Green essence of cognac, classified as an alcoholic compound under paragraph 2, tariff act of 1897, was claimed to be dutiable as an ether or fruit essence under paragraph 21. The Board found the article to be an essential oil containing no alcohol, and held that it should have been classified under paragraph 3, relating to essential oils. This contention not having been made by the importers, the protest was overruled.

No. 20240.—Cologne Water.—Protest 285431 of J. E. Leikauf (New York). Opinion by Chamberlain, G. A.

So-called "kolognia" was found to consist of cologne water and was held to have been properly classified as an alcoholic compound under paragraph 2, tariff act of 1897.

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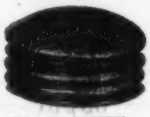

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